claims) are made without prejudice or disclaimer. Reconsideration is respectfully requested.

1. Examiner Interview:

Applicants would first like to thank Examiner Connell and her Supervisory Primary Examiner Clark for the courtesy extended during the interview of 16 June 2000. Applicants considered the interview helpful in clarifying the issues and understanding the rejections, and also considered the interview extremely efficient as evidenced by the summary of the interview, *i.e.*,

> Gall 96 teaches Ad5-Ad7 claims geared towards Ad7-Ad5. Claim 12 may be withdrawn from consideration and filed in a continuation. Table showing various serotypes may [be] entered via a 132 decl. Amendment distinguishes over the prior art for non canceled claims.

With regards to a "table showing various serotypes", a DECLARATION UNDER 37 C.F.R. § 1.132 is respectfully submitted herewith. The Declaration describes work conducted by the first named inventor, Menzo Havenga. The materials and methods used in generating the data can be found on pages 55-60 of the referenced patent application, as well as within the body of the Declaration. Specifically, Figures 1, 3, and 4 of the Declaration show neutralization data for all or some of the adenoviral serotypes in one or more populations. Figure 2 compares the log ratio VP/CCID50 with % neutralization. These figures substantiate the referenced patent application at: p. 18, paragraphs 3-4, particularly lines 24-25; p. 19, paragraph 1; and p. 64 paragraph 3.

2. Claim Rejections - 35 U.S.C. § 112

Claims 1, 4-10, and 12 were rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. *Office Action*, page 1.

Applicants have amended the rejected non-canceled claims, and, in view of the amendments, respectfully request that the rejections be withdrawn.

Claims 4-8 and 12 are to be canceled, thus obviating those portions of the rejection.

Claim 1 was thought inadequate for use of the term "less antigenic". *Office Action*, page 1. The language was deemed objectionable since no baseline was given in the claim specifying as to

how much less than 'what' an adenovirus must be to be considered "less antigenic". *Id.* Accordingly and as discussed at the interview, the term "less antigenic" of claim 1 has been amended to clarify that when first and second serotypes of respectively higher and lower antigenicity are interchanged with respect to hexon and/or penton bases, the resulting chimeric adenovirus is less antigenic than the first serotype of higher antigenicity. In view of this amendment to claim 1, applicants respectfully request that the rejection be withdrawn.

Claim 9 was thought inadequate for use of the terms "diminished antigenicity" and "diminished capability". *Id.* at 2. The language was deemed objectionable since no baseline was given in the claims as to how 'diminished' or 'relatively low' the 'antigenicity' would be the resultant, chimeric adenovirus. *Id.* Accordingly, the terms "diminished antigenicity" and "relatively low antigenicity" in claim 9 were amended to reflect a similar baseline as in claim 1. Specifically, the chimeric adenovirus of claim 9 is to have "diminished antigenicity" or "relatively low antigenicity" as compared to a second adenovirus serotype of higher antigenicity.

Claim 10 was rejected in part for improper use of the indefinite article "A" when in reference or preamble to a dependent claim. *Id.* Accordingly, the indefinite article "[A]" in claims 9 and 10, has been changed to "[T]he" when referring to a dependent claim, as suggested by the Examiner.

Finally, claim 10 was further thought inadequate for use of the term "diminished capability". *Id.* The language was deemed objectionable since the term reflects a condition with no given baseline. *Id.* Accordingly, the term "diminished capability" in claim 10 was amended to reflect a similar baseline to claims 1 and 9. Specifically, the chimeric adenovirus of claim 10 is to have "diminished capability" to raise neutralizing antibodies as compared to a second adenovirus serotype of higher capability.

In view of the amendments to claims 1, 9 and 10, applicants respectfully request that the rejections be withdrawn.

3. <u>Claim Rejections - 35 U.S.C. § 102(a) and 102(b)</u>

Claim 1 was rejected under 35 U.S.C. § 102 (a) as being anticipated by Gall et al., 1998 ("Gall '98") which was published in December 1998. Claims 1 and 11 stand rejected under 35

U.S.C. § 102 (b) as being anticipated by Gall et al., 1996 ("Gall '96"). Claims 2-10 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Stevenson et al., 1998 ("Stevenson").

Regarding the 35 U.S.C. § 102 (a) anticipation rejection of claim 1 over Gall '98, enclosed is a certified, English language copy of applicants' European Patent Application No. 98202297.2 (filed 8 July 1998). The certified copy of the European Patent Application establishes applicants' right of priority under 35 U.S.C. § 119 (a) and (b), and further allows the application to antedate the Gall '98 reference. In view of applicants' now perfected priority claim, applicants respectfully request that this rejection be withdrawn.

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gall '96. As discussed and agreed at the Examiner Interview of 16 June 2000, Gall '96 does not describe the claimed chimeric adenovirus comprising "at least a part of a fiber protein of a first adenovirus serotype providing the chimeric virus with a desired host range and at least a part of a penton or hexon protein from a second adenovirus serotype that is less antigenic in a human than the first adenovirus serotype resulting in a chimeric adenovirus that is less antigenic in a human than the first adenovirus serotype."

Claims 2-10 were rejected as being anticipated by Stevenson (published June 1997). *Office Action*, at 5. Claims 4-8 canceled by the present amendment, thus obviating that portion of the rejection. Stevenson discusses creating a chimeric Ad5 adenovirus, for the purpose of altering Ad5 tissue tropism, by interchanging the Ad3 and Ad5 capsid fiber head domains. (See Stevenson, pages 4783 and 4789).

As discussed at the interview, Stevenson does not describe every limitation found in claims 9 and 10. More specifically, Stevenson does not describe the claim 2 limitation reciting:

> "a recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest, and further having an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of a first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of a second adenovirus of a different serotype, wherein the gene encoding the penton and/or hexon protein encodes a penton and/or hexon protein from an adenovirus serotype less antigenic in humans than the second serotype."

In view of these differences, it was agreed at the interview that the proposed amendments to claim 2 (and thus claim 3 that depends therefrom) distinguish over Stevenson.

As also discussed at the Examiner Interview, Stevenson does not disclose the method of amended claims 9 and 10. Specifically, Stevenson does not teach a method for producing a chimeric adenovirus having properties determined by a hexon and/or penton of a first adenovirus serotype and a desired host range determined by a fiber of a second adenovirus serotype, wherein a chimeric adenovirus is created to target a specific tissue while also having an altered antigenicity. Further, Stevenson does not describe a recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest in addition to an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of the first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of the second adenovirus.. In contrast, Stevenson describes interchanging only the fiber proteins of Ad5 and Ad3, and thus an insertion site only for one gene of interest, a fiber protein. In view of these (and other) critical differences, it was agreed that the proposed amendment distinguishes over Stevenson.

4. Claim Rejections - 35 U.S.C. § 103

Claims 1-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stevenson, in view of Gall '96. *Office Action*, at 7. It was agreed at the interview, however, that the invention defined by the amended claims would not be made obvious by the references of record including Stevenson and Gall '96.

5. Supplemental Information Disclosure Statement

Applicants submit herewith an Information Disclosure Statement listing co-pending applications naming inventor(s) common to this application.

6. Sequence Listing

Applicants additionally wish to note the enclosed Sequence Listing in paper and electronic

copy in compliance with the requirements of 37 C.F.R. §§ 1.821-1.825.

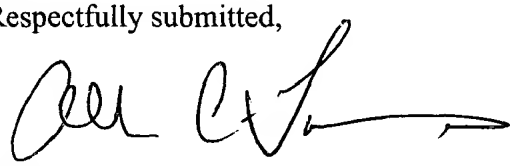
7. Reference to CIP in Transmittal filed with the Application

The Examiner requested clarification regarding Box 17 of the Transmittal indicating that the present application is a CIP of a prior U.S. patent application. Applicants advise the Examiner that the present application is not a CIP of a prior U.S. patent application, and that the indication of such on the Transmittal was in error. Applicants apologize for any inconvenience.

Conclusion

In view of the Examiner Interview, amendments, and remarks presented herein, applicants respectfully submit that the amended claims define patentable subject matter, as agreed. If questions should remain after consideration of the foregoing, the Examiner is kindly requested to contact applicants' attorney at the address or telephone number given herein.

Respectfully submitted,



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Date: August 1, 2000

Enclosures: European Patent no. 98202297.2
Declaration under 37 C.F.R. § 1.132
Sequence Listing (paper and electronic copy)
Statement Under 37 C.F.R. §§ 1.821 through 1.825

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